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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
09/803,066	03/08/2001	Paul Dubelsten	2151-57066	7212

7590 08/05/2004
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EXAMINER

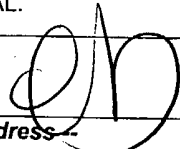
MACKEY, JAMES P

ART UNIT	PAPER NUMBER
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1722

DATE MAILED: 08/05/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	09/803,066	DUBELSTEN ET AL.	
	Examiner	Art Unit	
	James Mackey	1722	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 10 May 2004.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-4,6-9,11-25,32-42,45 and 73-77 is/are pending in the application.
- 4a) Of the above claim(s) 75-77 is/are withdrawn from consideration.
- 5) ☒ Claim(s) 1-4,6-9,12-25,73 and 74 is/are allowed.
- 6) ☒ Claim(s) 11,32-42 and 45 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>5/10/2004</u> . | 6) <input type="checkbox"/> Other: _____ |

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1. Claims 75-77 are withdrawn from further consideration pursuant to 37 CFR 1.142(b), as being drawn to a nonelected invention, there being no allowable generic or linking claim.

Applicant timely traversed the restriction (election) requirement in the reply filed on 25 September 2003.

Note that amended claims 75-77 are directed to a method for continuously forming composites, which corresponds to the non-elected invention.

2. Claims 36, 39-42 and 74 are objected to because of the following informalities: in claims 36 and 39-42, the preamble does not match the "system" preamble of independent claim 32; and in claim 74, "the surface modifying apparatus" should be changed to --the surface modifier-- as recited in claim 73. Appropriate correction is required.

3. Claim 11 is objected to under 37 CFR 1.75(c), as being of improper dependent form for failing to further limit the subject matter of a previous claim. Applicant is required to cancel the claim(s), or amend the claim(s) to place the claim(s) in proper dependent form, or rewrite the claim(s) in independent form.

Claim 11 recites shrouds positioned to substantially surround one pair of gas cells; however, such is already recited in independent claim 1, from which claim 11 ultimately depends, and therefore claim 11 does not further limit the subject matter of a previous claim.

4. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

5. Claims 11, 35 and 37 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

Claim 11 is indefinite as to exactly how the shrouds of claim 11 relate to and cooperate with the shrouds of claim 1 (from which claim 11 ultimately depends).

Claims 35 and 37 are indefinite in that they recite that the densifying apparatus comprises the gas cells; however, independent claim 32 (from which claims 35 and 37 ultimately depend) recites that the gas cells are part of the consolidation apparatus, and the densifying apparatus is downstream of the consolidation apparatus; therefore, it is unclear how the densifying apparatus may include gas cells which are required to be upstream of the densifying apparatus.

6. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

7. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

8. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later

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invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

9. Claims 32-42 are rejected under 35 U.S.C. 103(a) as being unpatentable over Tilby (U.S. Patent 5,248,546) in view of Means (U.S. Patent 2,909,804) and Bielfeldt (U.S. Patent 6,054,081).

Tilby discloses a system for forming panels of fibrous materials substantially as claimed, including a mat forming apparatus 46, a continuous consolidation apparatus 76 for applying a hot gas to both sides of a charge in a consolidation zone (note col. 6, lines 60-62, stating that the belts “compress and hold the strand pile” along the parallel portions), the consolidation apparatus comprising plural paired gas cells wherein a first cell of each pair applied gas to one major surface of the charge and a second cell of each pair operates at a pressure less than that of the first cell (note that fans 86 inherently provide a suction in the receiving cells) to receive gas passing through the charge, and a densifying apparatus 60 upstream of the consolidation apparatus. Tilby does not explicitly disclose a mixer for forming a mixture which is sent to the mat forming apparatus, and does not explicitly disclose a densifying apparatus or a press downstream of the consolidation apparatus. Means discloses a system for forming panels of fibrous materials (col. 2, lines 41-44), including a mixer 24 and a cyclone mixer/separator 28 for supplying a mixture of fibrous material to a mat forming apparatus 30, and a mat densifying and consolidating apparatus. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Tilby by providing a mixer which may include a cyclone mixer, as disclosed in Means, in order to adequately mix the feed materials and thereby assure uniformity in the formed panel. Bielfeldt discloses a system for forming panels from a mixture of fibrous

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materials (col. 2, lines 52-54), including a mat forming apparatus 1, a consolidation apparatus 8 for applying a hot gas to both sides of a charge in a consolidation zone (the hot gas being supplied/removed as indicated by arrows 17 and 16), an upstream densifying apparatus 5, a downstream densifying apparatus 9 (having press cells 18, 19 and including rollers 23, 27), and an additional downstream densifying “main press” 3. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Tilby by providing a densifying apparatus and additional densifying press downstream of the consolidation apparatus, as disclosed in Bielfeldt, in order to provide a highly dense panel with beneficial strength properties. It would have been further obvious and well within the level of ordinary skill in the art to have provided the additional densifying press as a press stamping apparatus, operating batchwise, since such is a recognized equivalent press apparatus to the “main press” 3 of Bielfeldt.

10. Claim 45 is rejected under 35 U.S.C. 103(a) as being unpatentable over Tilby in view of Means and Bielfeldt, as applied to claims 32-42 above, and further in view of Schedin et al. (U.S. Patent 5,711,972; Figure 5).

Tilby, as modified by Means and Bielfeldt, discloses the system substantially as claimed, except for the gas cells being rollers. Schedin et al. teach the use of gas roller cells for providing a heated fluid to a mat being consolidated. It would have been obvious to one of ordinary skill in the art at the time of the invention to modify Tilby by providing the gas cells as paired gas cell rollers, as disclosed in Schedin et al., since such were equivalent means for providing a heated fluid to the material being consolidated.

11. Claims 1-4, 6-9, 12-25, 73 and 74 are allowed.

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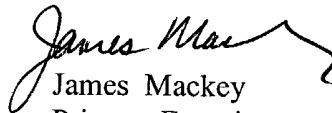
12. Applicant's arguments with respect to claims 32-42 and 45 have been considered but are moot in view of the new ground(s) of rejection.

Note that applicant argues that the prior art of record does not teach or suggest an apparatus having shrouds, such an argument is not commensurate in scope with claims 32-42 and 45, which do not require shrouds.

13. Any inquiry concerning this communication or earlier communications from the examiner should be directed to James Mackey whose telephone number is 571-272-1135. The examiner can normally be reached on M-F, 8:30-5:00.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Wanda Walker can be reached on 571-272-1151. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).


James Mackey
Primary Examiner
Art Unit 1722

7/29/04

jpm
July 29, 2004